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S/110/60/000/007/003/005
E073/E535

Field Investigations of Solar Batteries

was studied on a separate set of two batteries, whose surfaces remained unprotected for the entire period of the investigations. The electric characteristics of some separate elements and of an hermetically-sealed battery submerged in water were also investigated. For all the investigated batteries and their elements a general technique was applied for determining the basic characteristics which are necessary for evaluating their effectiveness. The graph, Fig.2, shows the operating part of the volt-ampere characteristic of one element under an illumination intensity of 0.0925 W/cm^2 . The useful area of the element equalled 3.64 cm^2 ; the measurements were carried out at 35°C . Under optimum loading the element supplies a maximum power of 316 mW and its efficiency was 9.36% . In almost all elements the optimum load corresponds approximately to two-thirds of the no-load voltage. For determining the effectiveness of the element it is sufficient to find three characteristic points on the load curve, namely, the no-load voltage, U_{xx} , the short-circuit current, I_{K3} , and the current and voltage for the optimum load, I_H and U_H . A

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convenient parameter for evaluating the quality of a photoelectric element is the coefficient of filling of the load curve, k_H , representing the ratio of the maximum power in the case of optimal loading to the product of the no-load voltage and the short circuit current:

$$k_H = \frac{U_H \cdot I_H}{U_{x.x} \cdot I_{Kz}}$$

At the optimum voltage, the maximum value of k_H is 0.7. During the experiments the temperature of the ambient air fluctuated between 15 and 45°C; the temperature of the battery was always higher, and fluctuated between 20 and 60°C. In most cases a lower temperature corresponded to a lower intensity of solar radiation. The short-circuit current increased with increasing temperature up to 100°C and then decreased sharply. k_H decreased insignificantly up to 100°C and then decreased sharply; the efficiency at 100°C was about 50% lower than at 30°C and at 160°C it dropped to almost zero. With increasing intensity of the solar radiation k_H decreased.

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Differences in values obtained for the same temperature range during certain days are attributed to increasing losses due to resistance in the battery with increasing intensity. Comparison of data obtained in various temperature ranges for an equal zenith distance indicates that k_H decreased sharply. The change in the spectral composition had little effect on k_H , which is attributed solely to an increase in the temperature. The efficiency at an operating temperature of 45 to 50°C is about 8% lower than in the temperature range 35 to 40°C. By using mirrors with an area about 1.5 times larger than that of the solar battery, a twofold increase of the output was achieved. Protective glass reduces the conditions of heat transfer from the surface and raises the operating temperature by 20 to 30°C. Furthermore, the losses due to absorption of the glass are about 10%. A naturally transparent film permits of an efficiency about 25% higher than can be obtained if perspex is used. Submersion in water to a depth of 5 to 40 cm brought about a considerable drop in the short-circuit current, to about one-sixth at a depth of 40 cm. The no-load voltage remained unchanged up to a depth of 40 cm. The characteristics were fully maintained if the

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elements were submerged to a depth not exceeding 0.5 cm. Exposure to weather did not result in any appreciable deterioration during the entire duration of the tests. The obtained temperature-dependence of the e.m.f. confirmed the known dependence according to which the e.m.f. drops with increasing temperature at a rate of 0.00288 V/°C. Cooling is particularly important when there is concentrated illumination over long periods. In the case of low-intensity radiation during the morning (10.0 to 15.0 mW/cm²), a power can be obtained which is equal to that obtained during higher radiation intensities. The results confirm that photoelectric transducers can operate effectively even on relatively cloudy days, and the use of radiation concentrators during such periods will ensure a power output comparable to that obtained during cloudless days. There are 8 figures and 7 references: 5 Soviet and 2 non-Soviet.

SUBMITTED: February 27, 1960

Card 6/6

DAVIDOVICH, Ya. G.

Cand Tech Sci - (diss) "Study of physico-mechanical and collector characteristics of brushes for electrical machines." Tomsk, 1961. 12 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov); 150 copies; price not given; (KL, 10-61 sup, 213)

24.7700

1143, 1043, 1138, 1160

21.92

S/020/61/137/004/016/031
B104/B206

AUTHORS: Fialkov, A. S. and Davidovich, Ya. G.

TITLE: The p-n -junction in carbon-graphite materials

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 4, 1961, 841-843

TEXT: For carbon-graphite materials the resistivity, thermo-emf and Hall effect have a marked dependence on the temperature of the heat treatment. This is in correlation with changes of the electron- and hole concentrations and the conductivity: a) with the redistribution of the electrons between the π - and σ -bonds as a consequence of the jump of electrons from the π state into the σ state (formation of holes); b) with the change of the number of collectivized electrons in the crystallization of the substance and with the approach of the Fermi levels from the upper limits of the conductivity band; c) with the change of the number and type of defects during annealing; d) with the removal of acceptor-donor impurities through heat treatment. It is pointed out that treatment, production, and type of carbon-graphite materials have a great effect on the above-mentioned factors. According to the temperature of treatment, a change in conducti-

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S/020/61/137/004/016/031
B104/B206

The p-n -junction in carbon-graphite...

vity is determined which forms a real premise for the production of p-n -junctions. Investigations were made on carbon elements with 6 mm diameter and 800 mm length, which were produced by pressing a mass consisting of coke from the Khanzhenkovskiy zavod (Khanzhenkov Plant) prepared at 1200°C, lampblack from the Kudinovskiy zavod (Kudinov Plant) and binding agents. Heat treatment was done for five minutes at temperatures from 1200 to 3200°C in argon atmosphere. The specimens had the dimensions 3 · 7 · 28 mm; Hall effect and resistivity were measured in the cold state. The Hall effect was measured with d.c. at a magnetic field strength of 6000 oersteds, the resistivity with separated electrodes. It can be seen from the results shown in Fig. 1 that a maximum p-type conductivity occurs at a treatment temperature of 2200°C. The Hall effect decreases again at a further temperature rise. The authors attributed this decrease to the effect of the stable carbon oxides developed during heat treatment, and they see the possibility of bringing about a further change of the sign of the conductivity. Further experiments on the change of the Hall effect with the temperature of treatment are necessary in order to check this possibility. A two-stage heat treatment at two different temperatures was conducted with the aim of producing a p-n -junction. p-n -junctions could

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The p-n -junction in carbon-graphite...

thus be produced by suitable treatment. The carrier concentration in the range of the p-n -junction, calculated from the measured Hall effect, is graphically shown in Fig. 2. It turned out that the width of the p-n-junction depends on the conditions of treatment. The characteristics of two thermocouples made from suitably treated carbon-graphite material, are shown in Fig. 3. The specimens of 800 mm length had p-n -junctions in the middle. There are 3 figures and 15 references: 4 Soviet-bloc and 11 non-Soviet-bloc.

PRESENTED: November 14, 1960, by P. A. Rebinder, Academician

SUBMITTED: November 9, 1960

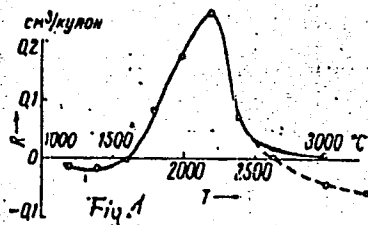
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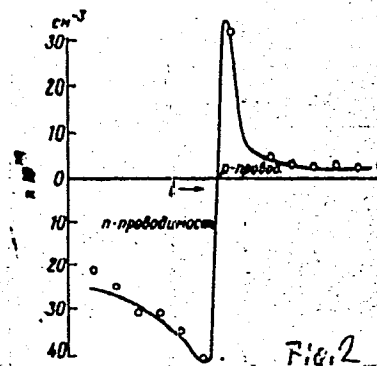
S/020/61/137/004/016/031
B104/B206

The p-n -junction in carbon-graphite...

Legend to Fig. 1: The effect of the treatment temperature on the Hall coefficient



Legend to Fig. 2: Carrier concentration in the range of the p-n -junction



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The p-n -junction in carbon-graphite...

Legend to Fig. 3: Thermo-emf
as a function of the temperature
of carbon-graphite thermo-
couples.

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S/020/61/137/004/016/031
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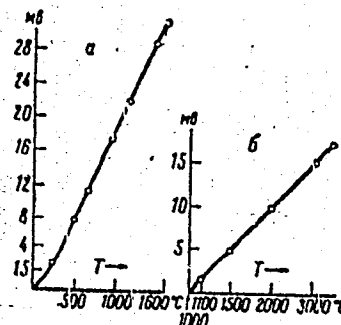


Fig. 3

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15.2250

21.2300

25387

S/080/6:/034/002/006/025
A057/A129

AUTHORS: Fialkov, A.S., Davidovich, Ya.G.

TITLE: Linear thermal elongation of carbon-graphite materials

PERIODICAL: Zhurnal Prikladnoy Khimii, v 34, no 2, 1961, 300-306

TEXT: The effect of composition and structure of natural graphites from various deposits on linear thermal elongation of carbon-graphite materials was investigated. This problem is important for the determination of the applicability of these materials at high temperatures, since the linear thermal expansion of carbon graphites with crystalline structure shows a marked anisotropy. Thus the linear expansion factor of graphite single crystals perpendicular to the graphite faces is $28 \cdot 10^{-6} \text{ } ^\circ\text{C}^{-1}$, and in the direction of the faces at $600\text{--}800^\circ\text{C}$ it is $+0.9 \cdot 10^{-6} \text{ } ^\circ\text{C}^{-1}$. The ratio between these two values can be called anisotropy factor of the linear expansion and should be smaller for polycrystalline carbon-graphite ma-

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Linear thermal elongation ...

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S/080/61/014/002/006/025
A057/A129

materials with no completely expressed three-dimensional order than for single crystals. The present experiments were carried out with mixtures of materials indicated in Table 1 using as binder a pitch (softening point 76°C) of the Gubakhinskii zavod (Gubakhinsk Plant). The samples were pressed (1,500 and 2,850 atm), sintered (1,300°C) and the linear thermal elongation measured at temperatures from 20 to 600°C on an apparatus presented in Fig 1. The quartz tube (1) with the sample (2) is inserted in the tubular furnace (3) and the temperature is regulated by an automatic ATP-1 (LATR-1) transformer (4). The tube is fixed on a plate (5) which is built in the wall (6). Linear expansion is transmitted by the quartz rod (7) to the indicator (8) which is fixed on a special socket (9). The indicator could be shifted together with the tube (10) by the micrometer screw (11). The temperature was registered by an automatic millivoltmeter of the MCMUPR-354 (MSShehPR-354) type. The effect of the density on the linear expansion was studied with sintered samples containing 8.5% Noginsk graphite, 42% petroleum coke and 49.5% binding coke. Linear expansion was measured also on natural graphite powders from deposits in Tayga, Botogol,

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Linear thermal elongation ...

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A057/A129

Zaval'yevo, Kurayusk, and blast furnace graphite. The effect of the crystallization degree was studied on X-ray patterns (made by K.V. Kononova with an YPC-70 (URS-70) camera and MΦ-4 (MF-4) photometer). Quantitative estimations of the graphitization degree (I_{112}/I_{110}) were made using values from F. Kessler, V. Vozarukova, Brennstoff-Chemie, 38,19/20,207 (1957), while crystallite dimensions L and L_0 were calculated by Selyakov-Scherrer's formula (Ref 3; Ya.S. Uman'skiy et al, "Rentgenografiya" ("Radiography"), Mashgiz (1951)). The effect of dispersion was studied on Tayga graphite with grain sizes below 45 μ , above 45 μ , and mixed sizes. The linear expansion factor was calculated from $\alpha = (l_{t_2} - l_{t_1}) / l_{t_1} (t_2 - t_1)$ (1) (l_{t_2} - final dimension of the sample at the temperature t_2 ; l_{t_1} - initial dimension of the sample at temperatures t_1 ; t_2 and t_1 - difference between the final and initial temperatures, l_{t_1} - dimension of the sample - mainly the initial dimension is used). Since practically the elongation was measured, equation (1) can be written $\alpha = \Delta l_{t_2} - \Delta l_{t_1} / l_{t_1} (t_2 - t_1)$ (2) (Δl_{t_2} and Δl_{t_1} - elongation of the sample at temperatures t_2 and t_1).

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S/080/51/034/002/006/025
A057/A129

Linear thermal elongation ...

respectively) thus the relative elongation $\Delta\alpha$ is one of the characteristics and if t_0 is the initial temperature, $\Delta\alpha = \Delta l/l_0$. Measurements on mixtures with various carbon black and graphite content demonstrate (Fig 2) that with increasing graphite content α increases in direction of the compression, and decreases in the perpendicular direction. Characteristic change of the coefficient $K\alpha$ of the anisotropy of linear expansion and of the specific electric resistance $K\rho$ with increasing graphite content is also observed (Fig 3). It can be seen from Fig 2 that α increases with pressure. Sharp change in α was observed after an additional increase in the density of carbon-graphite samples by a twofold impregnation with coal-tar pitch and sintering (Tab 3). Decrease in dispersity effects a sharp decrease of α (Tab 4). The dependence of α on the deposit and thermal treatment of natural graphite powders is visible in Tab 5. An almost linear function of α from the relative intensity of the lines $[112]$ to $[110]$ on X-ray patterns and of crystallite dimensions is observed. The obtained results demonstrate the considerable dependence of α on structure and composition of carbon-graphite materials. At low graphite contents

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Linear thermal elongation ...

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A057/A129

approximately the same values for K_α and K_ρ can be observed, while at higher graphite contents K_α is much greater than K_ρ . Characteristic changes of α observed in natural graphites of various deposits and thermal treatment can be explained by the fact that with heating to 2,500°C salt impurities are removed and an additional orientation of the crystalline graphite structure occurs. There are 5 figures, 5 tables and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

SUBMITTED: February 3, 1960

Card 5/12

FIALKOV, A.S.; DAVIDOVICH, Ya.G.; KONONOVA, K.V.; YURKOVSKIY, I.M.

Amorphous state of natural graphite powders. Dokl. AN SSSR 153
no.2:390-393 N '63. (MIRA 16:12)

1. Predstavleno akademikom P.A.Rebinderom.

FIALKOV, A.S.; DAVIDOVICH, Ya.G.; PROFIR'YEVA, G.A.

Interrelation of the physical and mechanical characteristics
of carbon-graphitic materials. Zav. lab. 30 no.7:864-868 '64.
(MIRA 18:3)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo instituta
elektromekhaniki.

L 65036.65 EWP(e)/EWP(m)/EPF(c)/EWP(1)/EWP(b) WB/WW

ACCESSION NR: AP5020776

UR/0226/65/000/008/0087/0095

AUTHOR: Elalkov, A. S.; Davidovich, Ya. G.; Pshenichkin, P. A.; Galeyev, G. S.

TITLE: Magnetic susceptibility and linear thermal expansion of carbon graphite materials

SOURCE: Poroshkovaya metallurgiya, no. 8, 1985, 87-95

TOPIC TAGS: carbon, graphite, pitch material, coke, magnetic susceptibility, thermal expansion, crystal anisotropy, magnetic anisotropy

ABSTRACT: Materials tested included cracking and pyrolysis cokes, lamp black, natural graphite, and middle temperature coal distillation residue (pitch). Properties of the materials are given in a table. The samples were tested in their initial state and after calcining at different temperatures. The pressed samples, measuring 115x215x30 mm, were sintered in electric furnaces at 900C and were graphited at 2700C. The magnetic susceptibility was measured by the method of Guy. The linear expansion was measured by a contactless method up to a temperature of 3000C. The coefficient of anisotropic linear expansion, K_a , was calculated from the formula $K_a = a_{||}/a_{\perp}$, where $a_{||}$ and a_{\perp} are the coefficients of

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L 65036-65

ACCESSION NR: AP5020776

linear expansion measured parallel and perpendicular to the direction of pressing. It was established that the coefficient of anisotropic linear expansion in polycrystalline carbon graphite materials, and their coefficient of anisotropic diamagnetic susceptibility, are always less than for a graphite monocrystal. The article sets up a relationship between the anisotropic diamagnetic susceptibility and the linear thermal expansion of carbon graphite materials. It is established that the coefficient of anisotropic diamagnetic susceptibility is the criterion for the development of a crystallographic grain structure in the material, and that it chiefly determines its formation in the powder form components. Maximum structural isotropy in carbon graphite materials made from petroleum cokes is attained after heat treatment at a temperature corresponding to a minimum value of the coefficient of diamagnetic susceptibility (from 600-700°C). The effect of the binder content on the magnetic susceptibility and the linear expansion of carbon graphite materials is discussed. Orig. art. has: 10 figures and 2 tables

ASSOCIATION: None
SUBMITTED: 13 May 84
NR REF SOV: 001
Card 2/2 *MLL*

ENCL: 00
OTHER: 003

SUB CODE: IC, EN

L 44178-66 EWP(c)/EWT(m) WW/WH

ACC NR: AP6011280 (A) SOURCE CODE: UR/0413/66/000/006/0157/0157

48
B

INVENTOR: Fialkov, A. S.; Davidovich, Ya. G.; Pakhomov, L. G.

ORG: none

TITLE: Treatment of carbon-graphite products. Class 21, No. 141194

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 157

TOPIC TAGS: carbon graphite product, ~~current treatment~~ carbon product, graphite, physical chemistry property, semiconductivity

ABSTRACT: This Author Certificate introduces a method for treating carbon-graphite products by passing a-c and d-c current through them. To obtain a sharply defined boundary of physical, chemical, and semiconductive properties along the length of the product, current of various magnitude is passed through various sections of the product at the same time that they are subjected to various degrees of cooling.

[LD]

SUB CODE: 11/3/ SUBM DATE: 03Jan61/

accum
Card 1/1

HELINSKAYA, A.V.; BOGUSLAVSKAYA, S.A.; DUBIN, A.S.; PRUSSAK, O.V.;
STARTSEV, V.I.; DAVIDOVICH, Ya.I., doktor yurid.nauk, red.;
KHRUSTALEV, B.F., red.; SHILOV, L.A., red.; VOLOLAGINA, S.D.,
tekhn.red.

[Socialist competition in Leningrad enterprises during the
years of the first five-year plan, 1928-1932] Sotsialisticheskoe
sorevnovanie na predpriyatiakh Leningrada v gody pervoi piati-
letki, 1928-1932 gg.; sbornik dokumentov i materialov. Pod red.
Ya.I.Davidovicha. Leningrad, Izd-vo Lening.univ., 1961. 343 p.
(MIRA 14:4)

1. Leningrad. Gosudarstvennyy arkhiv Okt'yabr'skoy revolyutsii i
sotsialisticheskogo stroitel'stva.

(Leningrad--Socialist competition)

DAVIDOVICH, Ya. L.

Davidovich, Ya. L. "Electrical Exploration in the Region Embanef." In the symposium: Neftianye Mestorozhdeniia Uralo-Embenskogo Raiona, Leningrad-Moscow, 1933, pp. 168-171.

LITVINSKIY, B.A.; DAVIDOVICH, Ye.A.

Preliminary information on the works of Khuttal group in the Vaksh Valley in 1953. Dokl.AN Tadzh.SSR no.11:53-60 '54. (MLRA 9:9)

1. Institut istorii, arkhologii i etnografii AN Tadjhikskey SSR.
Predstavlene deystvitel'nyy chlenom AN Tadjhikskey SSR, prof. A.A. Semenovym.
(Vaksh Valley--Excavations (Archaeology))

TOLSTOV, S.P.; KES', A.S., kand.geograf.nauk; ITINA, M.A., kand.istor.nauk; ANDRIANOV, B.V., kand.istor.nauk; ZHDANKO, T.A., kand.istor.nauk; VISHNEVSKAYA, O.A., nauchnyy sotrudnik; VAKTURSKAYA, N.N., kand.istor.nauk. Primali uchastiye LEVINA, L.M., aspirantka; TRUDNOVSKAYA, S.A.; DAVIDOVICH, Ye.A., kand.istor.nauk; ANDRIANOV, B.V., red.isd-va; LEVINA, L.M., tekhn.red.

[The lower reaches of the Amu Darya, the Sarykamysh and the Uzboy; history of their formation and settlement] Nizov'ia Amu-Dar'i, Sarykamysh, Uzboy; istoriia formirovaniia i zaseleniia. Pod obshchei red. S.P.Tolstova. Moskva, 1960. 346 p. (Materialy Khorezmskoi ekspeditsii, no.3). (MIRA 14:2)

1. Akademiya nauk SSSR. Institut etnografii. 2. Chlen-korrespondent AN SSSR (for Tolstov). 3. Institut etnografii AN SSSR (for Levina). 4. Akademiya nauk Tadzhikskoy SSR (for Davidovich). (Amu Darya Valley)

VINOGRADOV, M.G.; VINOGRADOVA, S.V.; DAVIDOVICH, Yu.A.; KORSHAK, V.V.

Coordination polymers. Report No.19: Properties of an inner-complex beryllium-containing polymer based on 4,4'-bis (acetoacetyl) diphenyl oxide. Izv. AN SSSR. Ser. khim. no.11: 2023-2027 N '63. (MIRA 17:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 21209-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWP(t)/EWP(b) Pc-4/Pr-4/Pc-4
 15P(c)/RPI JD/WN/JG/RM S/0190/64/006/012/2149/2154
 ACCESSION NR: AP5001479

AUTHOR: Kershak, V. V.; Vinogradova, S. V.; Vinogradov, M. G.; Davidovich, Yu. A.

TITLE: Studies in the field of coordination polymers. 22. The reversible decomposition of polymeric beryllium complexes with bis (beta-diketone) in solution

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 12, 1964, 2149-2154

TOPIC TAGS: coordination polymer, beryllium complex, heteroorganic compound, diketone polymer, heteroorganic polymer, polymer degradation, cyclic oligomer

ABSTRACT: Polymeric beryllium intracomplexes with 4,4'-bis-(acetoacetyl)diphenyl-oxide and with symmetrical 4,4'-bis-(acetoacetyl)diphenylethane were prepared by a published method and shown to decompose readily in heated dilute solutions in various organic solvents, yielding low molecular weight oligomers and reforming the original polymeric complex in concentrated solutions or recovered solids at higher temperatures. The polymers were heated to 50-350C under nitrogen in 0.5-50% solutions in chlorobenzene, biphenyl, dimethylformamide, acetophenone, anisole, chloroform or tetrachloroethane. The changes in viscosity indicated a temperature dependence of the equilibrium for the reversible decomposition. A similar thermal behavior had been observed with solutions of beryllium polysebacyldiacetate (Vysokomolekulyarnyye soyedineniya v. 6, 729, 1964). A generalized scheme for

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21209-65

ACCESSION NR: AP5001479

the reversible formation of cyclic oligomers from intracomplex beryllium polymers
is proposed. Orig. art. has: 3 tables, 5 figures and 3 formulas.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute for
Heteroorganic Compounds, AN SSSR)

SUBMITTED: 06 Feb 64

ENCL: 00

SUB CODE: OC

NO REF SOV: 003

OTHER: 001

Cont 2/2

KORSHAK, V.V.; ROGOZHIN, S.V.; DAVANKOV, V.A.; DAVIDOVICH, Yu.A.;
MAKAROVA, T.A.

Advances in the synthesis of polypeptides. Usp. khim. 34 no.5:
777-849 My '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soedineniy AN SSSR.

DAVIDOVICI, A.

Railroads in the second Five-Year Plan. p. 1

TEHNICA NOUA, Bucuresti, Vol 3, No. 35, Feb., 1956

SO: East European Accessions List (EEAL) Library of Congress, Vol 5, No. 7, July, 1956

GOLDSTEIN, Iosif; BARZOI, Maria; DAVIDOVICI, Cazimir

Considerations on the regional distribution of goods funds. Probleme econ 17 no.2:153-154 F 64.

1. Director, Intreprinderea Comertului cu Ridicata pentru Textile-Incaltaminte Petroseni, reg. Hunedoara (for Goldstein). 2. Seful Serv. Plan, Intreprinderea Comertului cu Ridicata pentru Textile-Incaltaminte Petroseni, reg. Hunedoara (for Barzoi). 3. Seful Serv. Comercial, Intreprinderea Comertului cu Ridicata pentru Textile-Incaltaminte Petroseni, reg. Hunedoara (for Davidovici).

technic;

S/194/62/000/005/041/157
D222/D309

AUTHOR: Davidovici, Mareel

TITLE: Automatic regulation of die temperature for powder
press

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
no. 5, 1962, abstract 5-2-175 i (Automat. si electron.,
1961, 5, no. 4, 180-185)

TEXT: The unit described has been designed by the electro-techni-
cal scientific institute in Bucharest (RNR). The regulator is an
electron tube circuit which controls an electronic HF generator of
2 kW active and 142 kva reactive power. The results of the experi-
mental investigation of the unit are given. 9 figures. 4 references.
[Abstractor's note: Complete translation].

Card 1/1

DAVIDOVICI, M.; POPESCU, I.M.; WEISS, A.M.

Realization of an installation for the constant magnetic field in the tests on the double magnetooptic resonance. Studii cerc fiz 12 no.3:631-644 '61.

1. Institutul de fizica atomica, Bucuresti.

(Magnetooptics) (Electronic instruments)
(Magnetic resonance)

S/058/62/000/010/051/093
A062/A101

AUTHORS: Davidovici, M., Popescu, I. M., Weiss, A. M.

TITLE: System devised for the constant magnetic field in magneto-optical double resonance experiments

PERIODICAL: Referativnyy zhurnal, Fizika, no. 10, 1962, 30, abstract 10V224
("Studii și cercetări fiz. Acad. RPR", 1961, v. 12, no. 3, 631 - 644
Rumanian; summaries in Russian and French) ✓

TEXT: A system of Helmholtz coils for experiments on magneto-optical double resonance is described. A magnetic field stability of $2 \cdot 10^{-4}$ per hour was achieved when changing the supply voltage from +5 to -15% and the loading impedance by +20%. The field uniformity in a volume of $3 \times 3 \times 3$ cm amounted to $\sim 10^{-4}$. The agreement obtained with calculated data was accurate to 0.35%.

[Abstracter's note: Complete translation]

Card 1/1

DAVIDOVICI, M., ing.; IANCU, Al., ing.; IONESCU, Tr., ing.; WEISS, Ad., ing.

Electronic computer for optimum load distribution among electric power plants considering the network losses. Energetica Rum 11 no.7:363-366 J1 '63.

DAVIDOVICI, P.

Struggle for quality in consumers' goods. p. 16.
STANDARDIZAREA, Bucuresti, Vol. 7, no. 6, June 1955.

SC: Monthly List of East European Accessions, (EMAL), LC, Vol. 4, no. 10, Oct. 1955,
Uncl.

DAVIDOVICS, I.

"The First Parachutist to Accomplish 200 Jumps" p. 4

"Decorations on the 36th Anniversary of the Great Socialist October Revolution" p. 4

"Aviation in the Service of Man" p. 5

"The Party is 35" p. 5

(Revue, Vol. 6, No. 22, November, 1953, Budapest)

SO: Monthly List of East European Vol. 3, No. 3 1954
Accessions / Library of Congress, March 1954, Uncl.

DAVIDOVSKAYA, F.G.; PLOTNIKOVA, Z.V.

Removal of a teratoma in a five-day-old child. Vop. okh. mat. i det. 3 no.1:
(MIRA 12:2)
86-87 Ja-F '59.

1. Iz rodil'nogo i khirurgicheskogo otdeleniy (klinicheskikh baz Rostov-
skogo meditsinskogo instituta) gorodskoy bol'nitsy No.1 (glavnyy vrach -
A. V. Goreshtnyak) (nauchnyye rukovoditeli - zav. kafedroy akusherstva i
ginekologii prof. P. Ya. Lel'chuk i zav. kafedroy obshchey khirurgii dots.
P.P. Kovalenko).

(CHILDREN--SURGERY) (SACROCOCCYGEAL REGION--TUMORS)

~~5(1)~~ 15.6100
AUTHORS:

Feygin, L. A., Davidovskaya, I. B.

66189

SOV/20-128-5-43/67

TITLE:

On the Scientific Fundamentals of the Preparation of Colloidal Graphite Lubricants

PERIODICAL:

Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 1012 - 1015 (USSR)

ABSTRACT:

The applications of these lubricants are recalled in the introduction. The following problems have to be met with in their production: graphite dispersion with a degree of maximum fineness; production of aggregate-stable preparations containing minimum quantities of detrimental admixtures deteriorating the antifriction properties of the preparation. The technological schemes so far suggested are criticized for being complicated and requiring too many working processes (Refs 1-3). Also, they do not guarantee the lubricity of the preparations. It was not until P. A. Rebinder and his school (Refs 4,5) investigated these problems that a new attempt was made to approach this problem. Several difficulties arise in finely dispersing graphite in connection with processing it to heat-resistant lubricants (Refs 6-8). The authors dispersed graphite in water and organic substances in airtight cylinders in an eccentric laboratory vibrational mill

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On the Scientific Fundamentals of the Preparation of Colloidal Graphite Lubricants

SOV/20-128-5-43/67

(Ref 9). It appeared that the surface concentration of the substance on the graphite, C_S mg/m² (Fig 1), determines the parameter of pulverization kinetics. The dispersion rate doubles as compared with a surface of maximum purity ($C_S=0$) with a value of $C_S=0.06$ mg/m², i.e. with a relative filling of one-fourth of the monomolecular layer. The ratio of humidity to the surface extension of graphite rather than the humidity content is of importance. The surface extension increases in dispersion. The authors describe the disintegration process of the graphite crystals and the effect of adsorbed vapor on the crystal face. These adsorption layers promote graphite dispersion along the basic face. The following preparation scheme for graphite lubricants is suggested on account of the results obtained: A certain quantity of water (or an aqueous solution of surface-active substances) roughly corresponding to the formation of a saturated monomolecular water layer is gradually added with the increase of specific surface. A C_S -value amounting to somewhat

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On the Scientific Fundamentals of the Preparation of Colloidal Graphite Lubricants SOV/20-128-5-43/67

less than 0.26 mg/m^2 is required for highly disperse preparations. The second and last process is the introduction of a corresponding quantity of e.g. the residual sulphite-spirit spent wash. The authors simultaneously solved two technological problems: They achieved (1) radical simplification of the technological scheme of producing colloidal graphite preparations, and (2) considerable improvement in the lubricity of these preparations. P. A. Rebinder, Academician, and V. N. Rozhanskiy participated in the discussion of the results. There are 1 figure and 11 Soviet references.

ASSOCIATION: Akademiya stroitel'stva i arkhitektury SSSR (Academy of Construction and Architecture, USSR) ✓

PRESENTED: May 22, 1959, by P. A. Rebinder, Academician

SUBMITTED: May 20, 1959

Card 3/3

OZONOVSKAYA, M.M. [Azanouskaia, M.M.]; DAVIDOVSKAYA, L.A. [Davidouskaia, L.A.]

Capacity of compounds of monovalent copper salts for reacting with
esters of phosphorous acid. Vestsi AN BSSR. Ser. fiz.-tekh. nav.
no.1:30-33 '59. (MIRA 12:6)

(Copper salts) (Phosphorous acid)

69021

5.2620

AUTHORS:

Azanovskaya, M. M., Davidovskaya, L. A. S/078/60/005/04/016/040
B004/B007

TITLE:

The Reactivity of the Complex Compounds of
Monovalent Copper With Esters of the Phosphorous Acid

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 4, PP 870 - 873
(USSR)

ABSTRACT:

The authors refer to a paper dealing with this problem by
A. Ye. Arbuzov (Ref 1). When studying the complexes of the mono-
halogen compounds of copper with esters of the phosphorous acids,
they found that compounds of the type $[CuHal.P(OR)_3]_3$ may enter
into reaction with amines, nitrogen-containing heterocyclic com-
pounds, arsines, and esters of the phosphorous acid according to
the equation $[CuHal.P(OR)_3]_3 + 3A \rightarrow 3CuHalP(OR)_3.A$, where in the
compounds investigated by the authors Hal means Cl, Br, I;
 $R = C_2H_5$, iso- C_3H_7 , C_6H_5 , and A = triethylamine, aniline, pyri-
dine, quinoline, triphenylarsine, trimethylphosphite, triethyl-
phosphite, and tri-isopropyl phosphite. A cleavage of the tri-
meric complex occurs, accompanied by formation of mixed complex
compounds. The authors proved that this reaction is reversible.
On the basis of their experimental data, they arrive at the

Card 1/2

BC

171 AND 171A (RUSSIA) 171 AND 171A (RUSSIA)

PROCESSES AND PROPERTIES INDEX

711

Mutual solubility and surface tension: V. V. SEMENOVICH and E. A. DAVIDOVSKAYA (J. Gen. Chem. Russ., 1954, 4, 929-932). The salts and substances which lower (raise) the tension at liquid-liquid interfaces increase (reduce) the mutual solubility of the liquids is verified for the systems $\text{MeOM} \cdot \text{C}_6\text{H}_6$ and nicotine- H_2O in presence of alkali chlorides and aliphatic acids.

R. T.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

171 AND 171A (RUSSIA) 171 AND 171A (RUSSIA)

PROCESSES AND PROPERTIES INDEX

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1ST AND 2ND ORDER PROCESSES AND PROPERTIES INDEX

100 AND 101M CODES

BC

2-1

Diffusion of zinc oxide in sulphuric acid. A. N. Kuznetsov and E. A. Davydovskaya. (J. Phys. Chem. Russ., 1936, 40, 11-12). Plated sheets of ZnO ($2 \times 2 \times 10$ cm), with one side covered by paraffin, are exposed to H_2SO_4 and the results are compared with the equation $X = (D \cdot 4 \pi \cdot t) \log (1/c - 1/c_0)$ where c = initial concentration of acid, c_0 = concentration of ZnO in solution at time t , D = coefficient of diffusion, t = time, X = the velocity of stirring. It decreases steadily with increase in concentration of H_2SO_4 . This can be accounted for by changes in activity and with all increases in activity with temp. All results agree with the assumption that diffusion is the process determining the dissolution velocity.

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

100M 101M 102M 103M 104M 105M 106M 107M 108M 109M 110M 111M 112M 113M 114M 115M 116M 117M 118M 119M 120M 121M 122M 123M 124M 125M 126M 127M 128M 129M 130M 131M 132M 133M 134M 135M 136M 137M 138M 139M 140M 141M 142M 143M 144M 145M 146M 147M 148M 149M 150M 151M 152M 153M 154M 155M 156M 157M 158M 159M 160M 161M 162M 163M 164M 165M 166M 167M 168M 169M 170M 171M 172M 173M 174M 175M 176M 177M 178M 179M 180M 181M 182M 183M 184M 185M 186M 187M 188M 189M 190M 191M 192M 193M 194M 195M 196M 197M 198M 199M 200M 201M 202M 203M 204M 205M 206M 207M 208M 209M 210M 211M 212M 213M 214M 215M 216M 217M 218M 219M 220M 221M 222M 223M 224M 225M 226M 227M 228M 229M 230M 231M 232M 233M 234M 235M 236M 237M 238M 239M 240M 241M 242M 243M 244M 245M 246M 247M 248M 249M 250M 251M 252M 253M 254M 255M 256M 257M 258M 259M 260M 261M 262M 263M 264M 265M 266M 267M 268M 269M 270M 271M 272M 273M 274M 275M 276M 277M 278M 279M 280M 281M 282M 283M 284M 285M 286M 287M 288M 289M 290M 291M 292M 293M 294M 295M 296M 297M 298M 299M 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1415M 1416M 1417M 1418M 1419M 1420M 1421M 1422M 1423M 1424M 1425M 1426M 1427M 1428M 1429M 1430M 1431M 1432M 1433M 1434M 1435M 1436M 1437M 1438M 1439M 1440M 1441M 1442M 1443M 1444M 1445M 1446M 1447M 1448M 1449M 1450M 1451M 1452M 1453M 1454M 1455M 1456M 1457M 1458M 1459M 1460M 1461M 1462M 1463M 1464M 1465M 1466M 1467M 1468M 1469M 1470M 1471M 1472M 1473M 1474M 1475M 1476M 1477M 1478M 1479M 1480M 1481M 1482M 1483M 1484M 1485M 1486M 1487M 1488M 1489M 1490M 1491M 1492M 1493M 1494M 1495M 1496M 1497M 1498M 1499M 1500M 1501M 1502M 1503M 1504M 1505M 1506M 1507M 1508M 1509M 1510M 1511M 1512M 1513M 1514M 1515M 1516M 1517M 1518M 1519M 1520M 1521M 1522M 1523M 1524M 1525M 1526M 1527M 1528M 1529M 1530M 1531M 1532M 1533M 1534M 1535M 1536M 1537M 1538M 1539M 1540M 1541M 1542M 1543M 1544M 1545M 1546M 1547M 1548M 1549M 1550M 1551M 1552M 1553M 1554M 1555M 1556M 1557M 1558M 1559M 1560M 1561M 1562M 1563M 1564M 1565M 1566M 1567M 1568M 1569M 1570M 1571M 1572M 1573M 1574M 1575M 1576M 1577M 1578M 1579M 1580M 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1747M 1748M 1749M 1750M 1751M 1752M 1753M 1754M 1755M 1756M 1757M 1758M 1759M 1760M 1761M 1762M 1763M 1764M 1765M 1766M 1767M 1768M 1769M 1770M 1771M 1772M 1773M 1774M 1775M 1776M 1777M 1778M 1779M 1780M 1781M 1782M 1783M 1784M 1785M 1786M 1787M 1788M 1789M 1790M 1791M 1792M 1793M 1794M 1795M 1796M 1797M 1798M 1799M 1800M 1801M 1802M 1803M 1804M 1805M 1806M 1807M 1808M 1809M 1810M 1811M 1812M 1813M 1814M 1815M 1816M 1817M 1818M 1819M 1820M 1821M 1822M 1823M 1824M 1825M 1826M 1827M 1828M 1829M 1830M 1831M 1832M 1833M 1834M 1835M 1836M 1837M 1838M 1839M 1840M 1841M 1842M 1843M 1844M 1845M 1846M 1847M 1848M 1849M 1850M 1851M 1852M 1853M 1854M 1855M 1856M 1857M 1858M 1859M 1860M 1861M 1862M 1863M 1864M 1865M 1866M 1867M 1868M 1869M 1870M 1871M 1872M 1873M 1874M 1875M 1876M 1877M 1878M 1879M 1880M 1881M 1882M 1883M 1884M 1885M 1886M 1887M 1888M 1889M 1890M 1891M 1892M 1893M 1894M 1895M 1896M 1897M 1898M 1899M 1900M 1901M 1902M 1903M 1904M 1905M 1906M 1907M 1908M 1909M 1910M 1911M 1912M 1913M 1914M 1915M 1916M 1917M 1918M 1919M 1920M 1921M 1922M 1923M 1924M 1925M 1926M 1927M 1928M 1929M 1930M 1931M 1932M 1933M 1934M 1935M 1936M 1937M 1938M 1939M 1940M 1941M 1942M 1943M 1944M 1945M 1946M 1947M 1948M 1949M 1950M 1951M 1952M 1953M 1954M 1955M 1956M 1957M 1958M 1959M 1960M 1961M 1962M 1963M 1964M 1965M 1966M 1967M 1968M 1969M 1970M 1971M 1972M 1973M 1974M 1975M 1976M 1977M 1978M 1979M 1980M 1981M 1982M 1983M 1984M 1985M 1986M 1987M 1988M 1989M 1990M 1991M 1992M 1993M 1994M 1995M 1996M 1997M 1998M 1999M 2000M 2001M 2002M 2003M 2004M 2005M 2006M 2007M 2008M 2009M 2010M 2011M 2012M 2013M 2014M 2015M 2016M 2017M 2018M 2019M 2020M 2021M 2022M 2023M 2024M 2025M 2026M 2027M 2028M 2029M 2030M 2031M 2032M 2033M 2034M 2035M 2036M 2037M 2038M 2039M 2040M 2041M 2042M 2043M 2044M 2045M 2046M 2047M 2048M 2049M 2050M 2051M 2052M 2053M 2054M 2055M 2056M 2057M 2058M 2059M 2060M 2061M 2062M 2063M 2064M 2065M 2066M 2067M 2068M 2069M 2070M 2071M 2072M 2073M 2074M 2075M 2076M 2077M 2078M 2079M 2080M 2081M 2082M 2083M 2084M 2085M 2086M 2087M 2088M 2089M 2090M 2091M 2092M 2093M 2094M 2095M 2096M 2097M 2098M 2099M 2100M 2101M 2102M 2103M 2104M 2105M 2106M 2107M 2108M 2109M 2110M 2111M 2112M 2113M 2114M 2115M 2116M 2117M 2118M 2119M 2120M 2121M 2122M 2123M 2124M 2125M 2126M 2127M 2128M 2129M 2130M 2131M 2132M 2133M 2134M 2135M 2136M 2137M 2138M 2139M 2140M 2141M 2142M 2143M 2144M 2145M 2146M 2147M 2148M 2149M 2150M 2151M 2152M 2153M 2154M 2155M 2156M 2157M 2158M 2159M 2160M 2161M 2162M 2163M 2164M 2165M 2166M 2167M 2168M 2169M 2170M 2171M 2172M 2173M 2174M 2175M 2176M 2177M 2178M 2179M 2180M 2181M 2182M 2183M 2184M 2185M 2186M 2187M 2188M 2189M 2190M 2191M 2192M 2193M 2194M 2195M 2196M 2197M 2198M 2199M 2200M 2201M 2202M 2203M 2204M 2205M 2206M 2207M 2208M 2209M 2210M 2211M 2212M 2213M 2214M 2215M 2216M 2217M 2218M 2219M 2220M 2221M 2222M 2223M 2224M 2225M 2226M 2227M 2228M 2229M 2230M 2231M 2232M 2233M 22

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PROCESSES AND PROPERTIES INDEX																									
<p>Protection Against Corrosion of the Petroleum Storage Tanks for Ishimbay Sulphur-Containing Petroleum by the Method of Metal-Spraying. E. A. Davidovskaya. (<i>Neft. Khozinstvo (Petroleum Ind.)</i>, 1938, (6), 35-38).—[In Russian.] Specimens of iron coated by the Schoop method with aluminium, lead, and zinc were tested for corrosion-resistance in the gas space above the petroleum, at the gas-petroleum line, and under conditions of total immersion in the petroleum. The aluminium coatings were found to be quite resistant to the action of the sulphurous Ishimbay petroleum, and were only corroded by the water which had accumulated at the bottom of the petroleum tank.—N. A.</p>																									
<p>ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION</p>																									
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<p>13041 5741214</p>																									

1ST AND 2ND COPIES		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH COPIES	
30		<p><i>cr</i></p> <p>Protection of vulcanization vats against corrosion by metal spraying. R. A. Davidovskaya. <i>Rubber and Rubber</i> (U. S. S. R.) 1960: Nos. 9, 21. Fe specimens sprayed with Al, Pb and Zn were tested in a vulcanization vat 2 m. in diam. and 4 m. long. Steam was admitted from the top at 1.5-2.5 atm. and 120-140°. Tests were extended for 1 yr. and over. In the vapor zone at the top of the vat, the Al coatings proved sufficiently stable and resistant, but at the bottom they were destroyed by the condensate. Pb coating was corroded at the top of the vat and formed PbSO₄ and scaled off from the edges. At the bottom of the vat the Pb coating was damaged along the edges of the specimens. The Zn coating was completely unstable. Zn-Al and Pb-Zn coatings also proved unsatisfactory as a result of the destruction of intermediate Zn layer. Bakelite lacquer applied to the Al coating and to the Fe of the vat on the top part did not adhere to the metal and cracked after 2 months, but at the bottom it proved stable for 9-10 months.</p> <p>H. Z. Kamich</p>			
<p>ASB.S.L.A. METALLURGICAL LITERATURE CLASSIFICATION</p> <p>FROM: 130-02124</p> <p>REMARKS: 130-02124</p>					

DAVIDOVSKAYA, YE. A.

25565

Metallizatsiya kak sredstvo zashchity ot korrosii. V sb: Korroziya, zashchita ot korrozii i elektroliz. M. , 1948, s. 86-138

--Bibliogr: 58 Nazv.

SO: LETOPIS NO. 30, 1948

DAVIDOVSKAYA, E. A.

RT-1567 (The study of corrosion stability of boiler steels under the action of high temperature steam) Izuchenie korrozionnoi stoikosti kotel'nykh stalei pod vozdeistviem para vysokikh temperatur. Pages 62-76 from:
KORROZIJA METALLOV POD NAPRIAZHENIEM I SPOSOBY ZASHCHITY. Moscow, 1950. (Original Russian source unavailable for review)

DAVIDOVSKAYA, Ye. A. Cand Tech Sci. and KESTEL', L. P. Engineer

"Method of Testing Steel for Gas Corrosion at High Temperatures," one of eight articles appearing in the book: "Investigation of the Stress Corrosion of Metals," edited by G.V.Akimov, Mashgiz, Moscow, 1953

Central Sci Res Inst of Technology and Machine Bldg.

Translation W-31586, 15 Dec 55

DAVIDOVSKAYA, L. A.

some stainless steels L. A. in the field of
tests: Yuzhnyy Kuznetskiy zavod no. 288, Krasnodar
Mashinostroyeniye, Mashinostroyeniye, Mashinostroyeniye

DAVIDOVSKAYA, E. A.

AVRASIN, Ya.D., kandidat tekhnicheskikh nauk; BERG, P.P., professor, doktor tekhnicheskikh nauk, BERNSHTEYN, M.L., kandidat tekhnicheskikh nauk; GENEROZOV, P.A., starshiy nauchnyy sotrudnik; GLINER, B.M., inzhener; ~~DAVIDOVSKAYA, Ya.A.~~, kandidat tekhnicheskikh nauk; YELCHIN, P.M., inzhener; YEREMIN, N.I., kandidat fiziko-matematicheskikh nauk; IVANOV, D.P., kandidat tekhnicheskikh nauk; KNOROV, L.I., inzhener; KOBRIN, M.M., kandidat tekhnicheskikh nauk; KORITSKIY, V.G., dotsent; KROTKOV, D.V., inzhener; KUDRYAVTSEV, I.V., professor, doktor tekhnicheskikh nauk; KULIKOV, I.V., kandidat tekhnicheskikh nauk; LEPETOV, V.A., kandidat tekhnicheskikh nauk; LIKINA, A.F., inzhener; MATVEYEV, A.S., kandidat tekhnicheskikh nauk; MIL'MAN, B.S., kandidat tekhnicheskikh nauk; PAVLUSHKIN, N.M., kandidat tekhnicheskikh nauk; PITTSYN, V.I., inzhener [deceased]; RAKOVSKIY, V.S., kandidat tekhnicheskikh nauk, RAKHSHTADT, A.G., kandidat tekhnicheskikh nauk; RYABCHENKOV, A.V., professor, doktor khimicheskikh nauk; SIGOLAYEV, S.Ya., kandidat tekhnicheskikh nauk; SMIRYAGIN, A.P., kandidat tekhnicheskikh nauk, SUL'KIN, A.G., inzhener; TUTOV, I.Ye., kandidat tekhnicheskikh nauk, KHRUSHCHOV, M.M., professor, doktor tekhnicheskikh nauk; TSYPIN, I.O., kandidat tekhnicheskikh nauk; SHAROV, M.Ye., inzhener; SHERMAN, Ya.I., dotsent; SHMELEV, B.A., kandidat tekhnicheskikh nauk; YUGANOVA, S.A., kandidat fiziko-matematicheskikh nauk; SATEL', E.A., doktor tekhnicheskikh nauk, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor

[Machine builder's reference book] Spravochnik mashinostroitelia; v shesti tomakh. izd-vo mashinostroit. lit-ry. Vol.6. (Glav. red.toma E.A.Satel'. Izd. 2-oe, ispr. i dop.) 1956. 500 p. (MLRA 9:8)
(Machinery--Construction)

Gaseous corrosion of stainless steels at high temperatures. E. A. Davis, G. K. Keeler, and J. M. Mandel.

After the corrosion product was washed off the steel test was jetted. The steels tested were identified in the figures by the following letters: A, B, B1, B2, B3, B4, B5, B6, B7, B8, B9, B10, B11, B12, B13, B14, B15, B16, B17, B18, B19, B20, B21, B22, B23, B24, B25, B26, B27, B28, B29, B30, B31, B32, B33, B34, B35, B36, B37, B38, B39, B40, B41, B42, B43, B44, B45, B46, B47, B48, B49, B50, B51, B52, B53, B54, B55, B56, B57, B58, B59, B60, B61, B62, B63, B64, B65, B66, B67, B68, B69, B70, B71, B72, B73, B74, B75, B76, B77, B78, B79, B80, B81, B82, B83, B84, B85, B86, B87, B88, B89, B90, B91, B92, B93, B94, B95, B96, B97, B98, B99, B100, B101, B102, B103, B104, B105, B106, B107, B108, B109, B110, B111, B112, B113, B114, B115, B116, B117, B118, B119, B120, B121, B122, B123, B124, B125, B126, B127, B128, B129, B130, B131, B132, B133, B134, B135, B136, B137, B138, B139, B140, B141, B142, B143, B144, B145, B146, B147, B148, B149, B150, B151, B152, B153, B154, B155, B156, B157, B158, B159, B160, B161, B162, B163, B164, B165, B166, B167, B168, B169, B170, B171, B172, B173, B174, B175, B176, B177, B178, B179, B180, B181, B182, B183, B184, B185, B186, B187, B188, B189, B190, B191, B192, B193, B194, B195, B196, B197, B198, B199, B200, B201, B202, B203, B204, B205, B206, B207, B208, B209, B210, B211, B212, B213, B214, B215, B216, B217, B218, B219, B220, B221, B222, B223, B224, B225, B226, B227, B228, B229, B230, B231, B232, B233, B234, B235, B236, B237, B238, B239, B240, B241, B242, B243, B244, B245, B246, B247, B248, B249, B250, B251, B252, B253, B254, B255, B256, B257, B258, B259, B260, B261, B262, B263, B264, B265, B266, B267, B268, B269, B270, B271, B272, B273, B274, B275, B276, B277, B278, B279, B280, B281, B282, B283, B284, B285, B286, B287, B288, B289, B290, B291, B292, B293, B294, B295, B296, B297, B298, B299, B300, B301, B302, B303, B304, B305, B306, B307, B308, B309, B310, B311, B312, B313, B314, B315, B316, B317, B318, B319, B320, B321, B322, B323, B324, B325, B326, B327, B328, B329, B330, B331, B332, B333, B334, B335, B336, B337, B338, B339, B340, B341, B342, B343, B344, B345, B346, B347, B348, B349, B350, B351, B352, B353, B354, B355, B356, B357, B358, B359, B360, B361, B362, B363, B364, B365, B366, B367, B368, B369, B370, B371, B372, B373, B374, B375, B376, B377, B378, B379, B380, B381, B382, B383, B384, B385, B386, B387, B388, B389, B390, B391, B392, B393, B394, B395, B396, B397, B398, B399, B400, B401, B402, B403, B404, B405, B406, B407, B408, B409, B410, B411, B412, B413, B414, B415, B416, B417, B418, B419, B420, B421, B422, B423, B424, B425, B426, B427, B428, B429, B430, B431, B432, B433, B434, B435, B436, B437, B438, B439, B440, B441, B442, B443, B444, B445, B446, B447, B448, B449, B450, B451, B452, B453, B454, B455, B456, B457, B458, B459, B460, B461, B462, B463, B464, B465, B466, B467, B468, B469, B470, B471, B472, B473, B474, B475, B476, B477, B478, B479, B480, B481, B482, B483, B484, B485, B486, B487, B488, B489, B490, B491, B492, B493, B494, B495, B496, B497, B498, B499, B500, B501, B502, B503, B504, B505, B506, B507, B508, B509, B510, B511, B512, B513, B514, B515, B516, B517, B518, B519, B520, B521, B522, B523, B524, B525, B526, B527, B528, B529, B530, B531, B532, B533, B534, B535, B536, B537, B538, B539, B540, B541, B542, B543, B544, B545, B546, B547, B548, B549, B550, B551, B552, B553, B554, B555, B556, B557, B558, B559, B560, B561, B562, B563, B564, B565, B566, B567, B568, B569, B570, B571, B572, B573, B574, B575, B576, B577, B578, B579, B580, B581, B582, B583, B584, B585, B586, B587, B588, B589, B590, B591, B592, B593, B594, B595, B596, B597, B598, B599, B600, B601, B602, B603, B604, B605, B606, B607, B608, B609, B610, B611, B612, B613, B614, B615, B616, B617, B618, B619, B620, B621, B622, B623, B624, B625, B626, B627, B628, B629, B630, B631, B632, B633, B634, B635, B636, B637, B638, B639, B640, B641, B642, B643, B644, B645, B646, B647, B648, B649, B650, B651, B652, B653, B654, B655, B656, B657, B658, B659, B660, B661, B662, B663, B664, B665, B666, B667, B668, B669, B670, B671, B672, B673, B674, B675, B676, B677, B678, B679, B680, B681, B682, B683, B684, B685, B686, B687, B688, B689, B690, B691, B692, B693, B694, B695, B696, B697, B698, B699, B700, B701, B702, B703, B704, B705, B706, B707, B708, B709, B710, B711, B712, B713, B714, B715, B716, B717, B718, B719, B720, B721, B722, B723, B724, B725, B726, B727, B728, B729, B730, B731, B732, B733, B734, B735, B736, B737, B738, B739, B740, B741, B742, B743, B744, B745, B746, B747, B748, B749, B750, B751, B752, B753, B754, B755, B756, B757, B758, B759, B760, B761, B762, B763, B764, B765, B766, B767, B768, B769, B770, B771, B772, B773, B774, B775, B776, B777, B778, B779, B780, B781, B782, B783, B784, B785, B786, B787, B788, B789, B790, B791, B792, B793, B794, B795, B796, B797, B798, B799, B800, B801, B802, B803, B804, B805, B806, B807, B808, B809, B810, B811, B812, B813, B814, B815, B816, B817, B818, B819, B820, B821, B822, B823, B824, B825, B826, B827, B828, B829, B830, B831, B832, B833, B834,

[illegible]

17
DAVIDOVSKAYA, E. A. & KESTEL, L. P.

18
B, Zh. D. and V, which had good oxidation resistance, had fine oxide layers that were sharply separated from the base metal. Steels D, E, and F, which had poor oxidation resistance, had a sharp separation between oxide and base metal, and in some instances there were two zones in the oxide layer. The micrographs taken at 500x magnification of the oxide layers of steels D, E, and F, which had poor oxidation resistance, are shown in Figures 1, 2, and 3 that had been recorded. Steels B, V, and D, which had good oxidation resistance, are shown in Figures 4, 5, and 6.

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Davidovskaya, Ye. A.

129-3-4/14

AUTHORS: Gel'man, A.S., Griboyedova, T.S., Ye.A. Davidovskaya, Lazarev, B.I., Lyubavskiy, K.V., Slepak, E.S., Trunin, I.I. and Fedortsov-Lutikov, G.P.

TITLE: Investigation of the Steel 1X18H12T as Tube Material for Power-generation Equipment (Issledovaniye stali 1Kh18N12T v kachestve trubnogo materiala dlya energoustanovok)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, No.3, pp. 16 - 24 (USSR).

ABSTRACT: For producing tubes operating at super-critical steam parameters, it is necessary to have available a cheap, strong and ductile material which has a stable structure and stable properties at 550 to 650 °C, is not inclined to develop inter-crystallite corrosion and possesses good technological properties. The work carried out in 1952 and 1953 by TsNIITMASH jointly with the imeni Ordzhonikidze Works (Ref.1) proved that it was possible to utilise cheap steel of the type 1X18H9T for operation at high temperatures. Later, complex investigations were carried out with this steel as a material for tubes of super-critical parameter power-generation equipment. The steel 1X18H9T may contain large quantities of ferrite and, after long-duration annealing at 600 to 700 °C, it embrittles due to the formation of a σ -phase. Increase in the nickel content

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Investigation of the Steel 1X18H12T as Tube Material for Power-generation Equipment

heat-treated in accordance with these recommendations are entered in Table 6, p.24, for test temperatures of 20, 600, 650 and 700 °C. Practically no embrittlement takes place for this steel after ageing at 600 and 750 °C for durations of 3 000 to 10 000 hours; no σ -phase formation could be detected after such ageing for steel containing 12% Ni, whilst under similar conditions, σ -phase formation can occur in steel containing 10 % Ni. Preliminary, non-uniform work-hardening influences the ultimate strength of the steel, but does not influence appreciably the ductility in the case of long-duration loading. In the case of contact-welding of tubes of superheaters, the strength of non-heat-treated weld joints is not lower than that of the base metal. Steam at 600 °C and long-duration tests for up to 3 000 hours do not affect appreciably the long-duration strength of the steel and of welded joints. The steels 1X18H12T and 1X18H9T are less inclined to develop thermal fatigue than the steel 1X14H14B2M, and the authors recommend using the steel 1X18H12T for tubes of power-generating equipment, operating with steam of super-critical parameters. There are 5 figures, 6 tables and 8 references, 5 of which are Russian, and 3 English.

Card3/4

129-3-4/14

Investigation of the Steel 1X18H12T as Tube Material for Power-generation Equipment

ASSOCIATION: TsNIITMASH

AVAILABLE: Library of Congress
Card 4/4

DAVIDOVSKAYA, Yelena Aleksandrovna, kand. tekhn. nauk; KESTEL',
Lyubov' Prokof'yevna, inzh.; URYUPINA, Yekaterina Ivanovna,
kand. tekhn. nauk; RAGAZINA, M.F., inzh., ved. red.;
SAMOKHOTSKIY, A.I., inzh., red.; PONOMAREV, V.A., tekhn.red.

[Effect of heat treatment on the tendency in stainless steel
toward intercrystalline corrosion] Vliianie termicheskoi ob-
rabotki na sklonnost' nerzhavayushchikh stalei k mezhkristal-
litnoi korrozii. Moskva, Filial Vses. in-ta nauchn. i tekhn.
informatsii, 1958. 11 p. (Peredovoi nauchno-tekhnicheskii i
proizvodstvennyi opyt. Tema 13. No.M-58-15/1) (MIRA 16:3)
(Steel, Stainless—Corrosion)
(Metals, Effect of temperature on)

DAVIDOVSKAYA, Ye.A., kand.tekhn.nauk; KESTEL', I.P., inzh.

Investigating the heat resistance of alloyed steels in various
gas media. Energomashinostroenie 4 no.11:15-19 N '58.
(Steel alloys) (MIRA 11:11)

AUTHORS: Davidovskaya, Ye. A., Candidate of Technical Science and
Kestel', L. P., Engineer 129-58-8-6/16

TITLE: Investigation of the Influence of Super-Heated Water
Vapour on the Long Duration Strength of Austenitic Steel
(Issledovaniye vliyaniya peregretoego vodyanogo
para na dlitel'nuyu prochnost' austenitnoy stali)

PERIODICAL: Metallovedeniye i Obrabotka Metallov, 1958, Nr 8,
pp 29-33 (USSR)

ABSTRACT: The aim of the work described in this paper was to study
the influence of super-heated steam on the long duration
strength of the Steel EI257 at 600°C. The test specimens
were produced from cut-offs of tubes of 102/68 mm; the
blanks were first hardened from 1150°C in water. The
chemical composition and the mechanical properties of the
steel of the individual specimens are entered in Tables 1
and 2, p 30. The specimens were of 4 mm dia. with a test
length of 25 mm. The long duration strength tests were
effected on test machines VP-8. The test rig for testing
in the gaseous medium consisted of a steam generator, a
steam super-heater and a furnace, a schematic sketch of
which is reproduced in Fig.1, p.30. Comparative tests

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Investigation of the Influence of Super-Heated Water Vapour on the
Long Duration Strength of Austenitic Steel

129-58-8-6/16

were effected for two types of heat treatment, namely, hardening and hardening followed by tempering at 750°C for ten hours. After hardening, the structure consisted of austenite with a small quantity of carbide separations predominantly along the grain boundaries; in this state the steel is chemically stable and does not tend to develop inter-crystallite corrosion. However, after short duration annealing at $600-800^{\circ}\text{C}$ considerable quantities of the carbide phase separate out from the solid solution; the chemical stability of the steel is appreciably reduced and it becomes prone to inter-crystallite corrosion. Therefore, the investigations were carried out using two differing types of heat treatment and the results are entered in Table 3 and graphed in Fig.2a. It can be seen that the time to failure is practically equal in super-heated steam and in air; it can be seen from Fig.2 that the stress-time to failure relation is represented in logarithmic coordinates by a straight line without any discontinuity. After tempering (at 750°C for ten hours), the steel showed great

Card 2/4

129-58-8-6/16

Investigation of the Influence of Super-Heated Water Vapour on the Long Duration Strength of Austenitic Steel

inclination to inter-crystallite corrosion and was less stable and in such a state the steel must not be used for operation in liquid media. The actual results of tensile tests at 600°C in such a state are entered in Table 4 (for air and super-heated steam). The long duration strength of this steel was also investigated in super-heated steam at 600°C in presence of a molten alkali and the results are entered in Table 5. The carried out tests indicate that pure super-heated steam which does not contain any salt admixtures does not reduce the strength of this steel at high temperatures. However, the presence of salts which become deposited on such steel may reduce appreciably the strength characteristics and, therefore, in practical operation it is essential to purify carefully the super-heated steam from salt contaminations.

Card 3/4

Investigation of the Influence of Super-Heated Water Vapour on the
Long Duration Strength of Austenitic Steel

129-58-8-6/16

There are 3 figures, 5 tables and 1 Soviet reference.

ASSOCIATION: TsNIITMASH

1. Steel--Mechanical properties
2. Steel--Test methods
3. Steel--Temperature factors
4. Steam--Applications

Card 4/4

18(7)

PLANS : BOOK EXTRACTS

807/2296

Abstracts of machine-technology: daily institute technology i machine-technology
of Metals in the Machine-building Industry (Corrosion and Protection
(Mashinostroyeniye) Moscow, Mashgiz, 1979. 347 p.
(Mashinostroyeniye) No. 98) 5,500 copies printed.

Ed.: A. V. Rykova; Doctor of Chemical Sciences, Professor; Ed. of Publishing
House: A. I. Krotin, Engineer; Tech. Ed.: I. I. Krotin, Managing Ed. for
Literature on Heavy Machine Building (Mashgiz); S. N. Golovin, Engineer.

REMARKS: This collection of articles is intended for designers, technologists,
and industrial and research workers concerned with corrosion and corrosion
protection of metals.

CONTENTS: This collection of articles deals with problems of corrosion and metal
protection under investigation at Mashinostroyeniye during the past two years.
Articles discuss stress corrosion, intergranular corrosion, scale and heat
treatment of austenitic steels in corrosive media, protective coatings, fret-
ting corrosion, and resistance of metals to cavitation. No personalities are
mentioned. References follow each article.

TABLE OF CONTENTS

Rykov, A. V., E. I. Krotin (Candidate of Physical and Mathematical
Sciences), A. I. Krotin, and A. V. Krotin (Engineer). Method of
Determining the Resistance of Steel to Intergranular Corrosion by Drill-
ing High-Frequency Resonance Treatments

PART II. GAS CORROSION AND ITS EFFECT ON THE MECHANICAL PROPERTIES
OF AUSTENITIC STEELS

Rykov, A. V., E. I. Krotin (Candidate of Technical Sciences), and L. P. Krotin
(Engineer). Gas-Resisting Alloy Steels in Different Gas Media
The authors discuss the mechanism of high-temperature oxidation of
steels and steels/gas media, including temperature, oxide films of austenitic
steels, and rates of corrosion.

Rykov, L. P., and E. I. Krotin. Effect of a Concentration of Sul-
fur Dioxide and Steam on the Corrosion of Austenitic Steels at High Temper-
atures

Rykov, A. V., E. I. Krotin (Candidate of Technical Sciences), and L. P. Krotin
(Engineer). Effect of Corrosive Gas Media on Long-Time Fatigue Strength
of Austenitic Steel Steels

The present investigation was made by the authors to determine
the effect of fuel combustion products on three different cast
steels used in gas turbine construction.

Rykov, A. V., E. I. Krotin, and V. S. Smirnov (Engineer). Study of
Decay and Corrosion Resistance of Various Materials for Carbon Dioxide
Environments Under Operating Conditions

The authors make recommendations for the most suitable materials for
linear and other linings of carbon dioxide reactors.

Rykov, A. V., E. I. Krotin (Engineer), and G. V. Vedenin. Effect of Vibration Contained
in Heavy Fuel on Scale and Heat Resistance of Alloys Used in Gas Turbines

The authors present a survey of Soviet and non-Soviet literature on
this subject and discuss methods of investigation.

PART III. PREVENTIVE MEASURES

Rykov, A. V. (Candidate of Technical Sciences), E. I. Krotin (Candidate of
Technical Sciences), V. S. Smirnov (Engineer), and L. P. Krotin (Senior Tech-
nician). Investigating the Possibility of Applying Wear-Resistant Chrom-
ium Coatings

Investigation is made on the basis of the similarity to the process of
chromium plating of piston rings, cylinder sleeves of combustion
engines, and other parts working under high friction.

Rykov, V. S. Effect of Chromes Plating on the Wear Resistance of Me-
tals

The author studies the effect of cathodic current density and
temperature of the electrolyte on the wear resistance of the deposit
and the plated insert.

Chart 5/6

DAVIDOVSKAYA, Ye.A., kand.tekhn.nauk; KESTEL', L.P., inzh.

Heat resistance of austenite steels in gaseous media.
[Trudy] TSNIITMASH 100:59-69 '59. (MIRA 13:7)
(Heat-resistant alloys)
(Steel--Metallurgy)

MAKSIMOV, A.I., inzh.; SOROKIN, P.V., inzh.; DAVIDOVSKAYA, Ye.A.; kand.
tekhn.nauk; VEDENKIN, S.G., prof.

Long-time strength of austenite steels in fuel combustion
products and in superheated steam. [Trudy] TSNIITMASH
100:70-89 '59. (MIRA 13:7)
(Heat-resistant alloys)

DAVIDOVSKAYA, YE. A.

PLATE 1 BOOK IDENTIFICATION

800/4555

Makhtsiallinga korroziya i korroziya metallo v razrysheniye sostoyaniy "intermetallicheskiy i stress corrosion" Moscow, Metallurg, 1960.
356 p. 3,000 copies printed.

1. A. Levin, Candidate of Technical Sciences; Ed. of Publishing House: I. I. Lashchenko, Engineer, Tech. Sci.; V. D. El'tsyev, Managing Ed. for Literature on Metallurgical and Inorganic Metals (Metallurgy); V. V. Kabanovskiy, Engineer, Editorial Board: I. A. Iordis, Candidate of Technical Sciences; (Chairman); V. P. Barabarov, Candidate of Technical Sciences; V. M. Mikhomov, Candidate of Technical Sciences; and A. V. Tikhonovskiy, Candidate of Technical Sciences.

NOTE: This collection of articles is intended for technical personnel concerned with problems of corrosion of metals.

stainless steels and stress corrosion of intergranular corrosion of steels, and light-weight and nonferrous alloy. The tendency of steels of various composition and systems to corrode under certain conditions is discussed and the nature of corrosion and corrosion cracking is analyzed. No personalities are mentioned. Most of the articles are accompanied by bibliographic references, the majority of which are Soviet.

II. INVESTIGATION OF CORROSION OF STAINLESS STEELS

Chasels, M. I., Candidate of Technical Sciences, S. I. Vol'fson, and Yu. S. Medvedev, Engineer. Effect of Slow Heating on the Tendency of Iron-Nickel Steel Toward Intergranular Corrosion

Columbini, J. F., *Candidate of Technical Sciences, and Z. F. Irtina, Junior Scientific Worker. Study of the Reliability of the Oaladys, JKO-59, and 1 D-59-2 Types of Chromium-Nickel Steels toward Intergranular Corrosion*

McHenry, D. J., J. A. Lacey, and M. M. Kutzgraff, "Evaluation of Technical Solutions. Intermetallic Corrosion Concentrated Along the Fusion Line of Welded Joints of the 18-8 Type Stabilized Steels ("Knife" Type Corrosion)"

Leffing, E. J., and E. Y. Minner.—Effect of the Electric Heating of the Irony Steel on the Processes Determining Its Resistance to Intergranular Corrosion

Davidovskaya, Ye. A., Candidate of Technical Sciences, L.P. Karsky,
Engineer and Ye. V. Chernykh, Candidate of Technical Sciences.

Intergranular Corrosion of Austenitic High-Strength Steels

Kovaleva, G.I., Candidate of Technical Sciences, and Tr. B. Murzayeva, Engineer. Intermetallic Corrosion and Corrosion Cracking of Stainless High-Alloy Austenitic Steels

Zlotors, Ya. V., Engineer. Tendency of Chromium-Nickel-Molybdenum-Copper Alloys toward Intergranular Corrosion

Rebuck, A.A., *Candidate of Technical Sciences, Development of Two-Phase Steels as an Effective Means of Increasing Stainless Steel Resistance to Intergranular Corrosion.*

Levin, I.A.: Candidate of Technical Sciences. More on the Problem of the Causes of Stainless Steel Inter-crystalline Corrosion

Vedemysers, A.A., Engineer, and H.D. Tomahory, Doctor of Chemical Sciences, Professor, Determining Interstitial Corrosion of Chromium-Nickel Austenitic Steels by Measuring the Internal Friction

Card 4/9

S/137/61/000/008/031/037
A060/A101

AUTHOR: Davidovskaya, Ye. A.

TITLE: Endurance of alloy steels in superheated steam

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 8, 1961, 15, abstract 8I113
("Korroziya i zashchita metallov v mashinostr." [TsNIITMASH, book 92]
Moscow, 1959, 125 - 138)

TEXT: A study was made of the effect of a superheated steam environment upon the endurance of steel 3Х1Т and 3Х724 (EYalT and EI724) designed for the manufacture of steam conduits and steam superheaters for superhigh-parameter boilers. It was established that the superheated steam environment at 600°C has no great effect upon the endurance of steel EYalT and EI724 both for the base metal and for welded joints. An investigation of the endurance of steel EYalT from different heats subjected to the same heat-treatment has shown that the smelting technique and the forging conditions have a considerably greater effect upon the σ_{end} than the gaseous medium surrounding the specimens. No effect of the superheated steam environment upon the ductility characteristics of both

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Endurance of alloy steels in superheated steam

S/137/61/000/008/031/037
A060/A101

steels has been discovered. Metallographic investigation did not establish an activating role of the superheated steam environment upon structural changes in the steel or the form of the fracture.

V. Tarisova

[Abstracter's note: Complete translation]

Card 2/2

26573
S/129/61/000/008/006/015
E075/E535

18.1111

AUTHOR: Davidovskaya, Ye.A., Candidate of Technical Sciences
TITLE: Influence of Some Alloying Elements on the Heat-resistance of the Steel 15X1M1Φ (15Kh1M1F)
PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, 1961, No. 8, pp. 26 - 28
TEXT: Low-alloy pearlitic steels are extensively used in high-temperature, high-pressure boiler construction. Intensified oxidation of these steels begins at 600 - 650 °C. certain gaseous media, water vapour or air with an admixture of moisture and sulphur compounds, may intensify oxidation at lower temperatures. The aim of the work was to find a means of improving the heat-resistance of pearlitic steels intended for operation in boilers, at 600 °C. The influence of various alloying elements on the resistance-to-corrosion in air and steam at 600 °C was investigated on the steel 15Kh1M1F. 19 heats (of 10 kg each) were produced. The following individual alloying elements were used (concentration in %):

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S/129/61/000/008/006/015

E073/E335

Influence of Some

Chromium	1; 2; 4.6
Silicon	0.3; 0.9; 1.5; 2.5
Aluminium	0.5; 1; 1.5; 2
Tungsten	1; 2; 3
Cobalt	1; 2; 3
Boron	0.05; 0.1 .

The specimens were made of material which was subjected to heating to 1 020 °C for 1.5 hours, cooling in the switched-off furnace to 700 °C, followed by cooling air with subsequent tempering at 720 °C for 5 hours. The refractoriness in terms of weight increase was investigated at 600 °C for 500 hours; the specimens were weighed after residence times of 25, 50, 75, 100, 150, 200, 300, 400 and 500 hours. The following conclusions were arrived at; 1) the influence of individual alloying elements on the resistance-to-corrosion of pearlitic steels at 600 °C depends on the ambient gaseous medium. 2) Additions of Al, Si, Cr and B showed the most favourable influence on the refractoriness of the steel 15Kh1M1F in air; an increase in the concentration of these elements brought about a considerable

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E073/E335

Influence of Some

decrease in the rate of oxidation. 3) The following steels have the highest refractoriness in air at 600 °C (weight increase 1 mg/cm²): 15X4M1Φ (15Kh4M1F); 15X6M1Φ (15Kh6M1F); 15X1M1ΦC2 (15Kh1M1F3S2); 15X1M1ΦCX (15Kh1M1F3Kh); 15X1M1Φ2H (15Kh1M1F2Yu); 15X1M1ΦB (15Kh1M1FV) and 15X1M1ΦP (15Kh1M1FR). 4) Addition of 2-3% Co has little influence in improving the refractoriness in air of the steel 15Kh1M1F. 5) The process of oxidation of the studied steels in air at 600 °C can be basically expressed by a parametric dependence. However, for some of the more refractory steels the validity of a logarithmic dependence was established. 6) Addition of each of the six alloying elements in various concentrations had hardly any influence on reducing oxidation of steel 15 and steel 15Kh1M1F in superheated steam; the rate of corrosion of all the steels was within the limits 5.5 - 7.5 mg/cm². 7) The most likely method of improving the corrosion-resistance of pearlitic steel at elevated temperatures

Card 3/4

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S/129/61/000/008/006/015
E073/E335

Influence of Some

in steam is to increase the chromium content to 6% and more.
Oxidation of the investigated pearlitic steels in steam at
600 °C proceeds in accordance with the parabolic relation.
There are 2 figures and 1 table.

ASSOCIATION: TsNIITMASH

Card 4/4

ZHOKHOV, P.I., inzh.; PERN, G.V., inzh.; DAVIDOVICH, Ye.M., inzh.; GABINOVA,
Sh.L., vrach; VASIL'YEVA, A.A., vrach; POPOV, B.V., vrach

Effect of smog in the air on landscape plantings. Gor.khoz.Mosk.
35 no.5:19-21 My '61. (MIRA 14:6)
(Moscow—Smog)

DAVIDOVSKIY, G.M.

Tillage system for fall-plowed fallow in piedmont and arid mountain-steppe regions of the Armenian S.S.R. Izv. AN Arm. SSR. Biol. i sel'khoz. nauki 2 no.2:195-199 '49. (MIRA 9:8)

1. Leninakanskaya gosudarstvennaya selektsionnaya stantsiya.
(ARMENIA—TILLAGE)

DAVIDOVSKIY, G.M.

Some biological features of sainfoin cultivation. Report no. 1.
Izv.AN Arm.SSR.Biol.i sel'khoz.nauki. 4 no.7:633-647 '51.

(MLRA 9:8)

1. Leninakanskaya gosudarstvennaya selektsionnaya stantsiya.
(Shiraki Steppe--Sainfoin)

DAVIDOVSKIY, G.M.

Some biological features of sainfoin cultivation. Report no. 2.

Izv. AN Arm. SSR. Biol. i sel'khoz. nauki 4. no. 8: 721-733 '54;

(MLRA 9:8)

1. Leninakanskaya gosudarstvennaya selektsionnaya stantsiya.
(Shiraki Steppe--Sainfoin)

DAVIDOVSKIY, G.M.

DAVIDOVSHIY, G.M.

Fall sowing of spring wheat and seed culture. Izv.An Arm.SSR.Biol.1
sel'khoz.nauki. 5 no.8:15-24 '52. (MLRA 9:8)

1. Gosudarstvennaya selektsionnaya stantsiya, Leniniakan.
(Armenia--Wheat)

DAVIDOVSKIY G.M.

Rational utilization of the sod of perennial grasses. Izv.AN Arm.
SSR.Biol.i sel'khoz.nauki. 5 no.9:45-51 '52. (MLRA 9:8)

1. Gosudarstvennaya selektsionnaya stantsiya, g. Leninakan.
(Armenia--Rotation of crops) (Grasses)

DAVIDOVSKIY, G.M.

Interspecific relations between weeds and cultivated plants.
Izv. AN Arm. SSR. Biol. nauki 15 no.2:49-59 '62. (MIRA 15:3)

1. Leninakanskaya selektsionnaya stantsiya.
(WEED CONTROL)
(PLANTS, CULTIVATED)

SHEYNKIN, B.L.; DAVIDOVSKIY, I.Z.

Rapid construction of a blast furnace for the Orsk-Khalilovo
Metallurgical Combine. Prom. stroi. 37 no.1:45-50 Ja '59.

(MIRA 12:1)

1. Trest Stal'montazh.

(Orsk-Khalilovi Industrial District--Blast furnaces)

DAVIDOVSKIY, L. Ya. Cand Med Sci -- (diss) "On certain variations in ~~the~~
conditional-reflex and vegetative nervous activity ~~in traumatic children~~ in
relation to ~~the~~ forms of rheumatism." ^(in children) [Minsk, 1959]. 12 pp (Minsk State Med
Inst). (KL, 52-59, 125)

DAVIDOVSKIY, L. Ya. (Vitebsk)

Mechanism of the so-called oculocardiac reflex. Zdrav. Belor.
5 no. 6:40-42 Je '59. (MIRA 12:9)
(REFLEXES) (BLOOD--CIRCULATION)

DAVIDOVSKIY, L.Ya.; DAURANOV, I.G.

Serum proteins in experimental allergic carditis. Vop.med.
khim. ll no.5:46-48 S-O '65.

(MIRA 19:1)

1. Kazakhskiy nauchno-issledovatel'skiy institut okhrany
materinstva i detstva, Alma-Ata. Submitted April 16, 1964.

ALEKSEYENKO, I.Ye., inzh.; DAVIDOVSKIY, M.M., inzh.

Repairing buttresses of suction pipes. Gidr.stroi. 30 no.8:
18-21 Ag '60. (MIRA 13:8)
(Dnieper Hydroelectric Power Station)

OCHERETYANYI, I.F., inzh.; DAVIDOVSKIY, M.M.

Major restoration and repair of the bituminous keys in the Dnieper
lock. Gidr. stroi. 32 no.1:24-25 Ja '62. (MIRA 15:3)
(Dnieper Hydroelectric Power Station--Locks (Hydraulic engineering)--
Maintenance and repair)

DAVIDOVSKIY, N. M.

PA 12/49T96

USSR/Medicine - Nervous System
Medicine - Arrhythmia

Jul 48

"Cases of Fluttering Arrhythmia Caused by Nerves,"
N. M. Davidovskiy, Faculty Therapeutic Clinic, First
Leningrad Med Inst imeni Acad I. P. Pavlov, 7 $\frac{1}{2}$ pp

"Klinicheskaya Meditsina" Vol XXVI, No 7

In the immediate postwar period, cases of fluttering arrhythmia, in which organic disease of the heart and hyperthyreosis were absent, were comparatively frequent at author's clinic. Five of such cases are described in detail and discussed. Cardiograms reproduced.

12/49T96

DAVIDOVSKIY, N.M.

BARANOV, V.G., professor; DRACHINSKAYA, Ye.S.; DAVIDOVSKIY, N.M.

Preoperative care of patients with toxic goiter [with summary in English p.153] Vest.khir. 77 no.12:86-91 D '56. (MLRA 10:2)

1. Iz laboratorii vozrastnoy fiziologii i patologii cheloveka (zav. - prof. V.G.Baranov) Instituta fiziologii im. I.P.Pavlova (dir. - akad. K.M.Bykov) Akademii nauk SSSR, fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. A.V.Mel'nikov) i fakul'tetskoy terapevticheskoy kliniki (zav. - prof. T.S.Istamanova) 1-go Leningradskogo meditsinskogo instituta im. I.P.Pavlova. 2. Chlen-korrespondent AMN SSSR (for Baranov)
Adres Baranova: Leningrad, pr.Dobrolyubova, d.13, kv.5.

(HYPERTHYROIDISM, surg.

preop. care)

(PREOPERATIVE CARE, in various dis.
hyperthyroidism)

DAVIDOVSKIY, N. M.

Country : USSR
 Category : Pharmacology and Toxicology. Ganglionic Blocking Preparations
 Abs. Jour. : Ref Zhur-Biol, No 13, 1958, No 61419
 Author : Davidovskiy, N. M.
 Institut. : -
 Title : Treatment of Angina Pectoris Patients with the Ganglionic Blocking Preparation Ganglorone
 Orig Pub. : Terapevt. arkhiv, 1957, 29, No 4, 51-58

Abstract : Ganglorone was used therapeutically in 80 angina pectoris patients. Satisfactory to excellent results were obtained in 65% of the patients, and definite improvement in 31%. In four patients, the treatment was ineffective. Aggravation was noted in none. Ganglorone was administered orally and subcutaneously in doses of 2-4 ml. of 1.5% solution three times and, in cases of severe forms of angina pectoris, four times daily. From the 2nd-3rd day, subcutaneous administration of

Card: 1/2 1. Iz kafedry fakul'tetskoy terapii (zav.-prof. T.S. Istamanova) I Leningradskogo meditsinskogo meditsinskogo institute imeni I.P. Pavlova.

DAVIDOVSKIY, N. M., Candidate Med Sci (diss) -- "The use of the new cholinolytic preparation gangleron to treat patients with angina pectoris". Leningrad, 1959. 16 pp (Min Health RSFSR, First Leningrad Med Inst im Acad I. P. Pavlov), 200 copies (KL, No 25, 1959, 140)

DAVIDOVSKIY, N.M.

(Leningrad)

Materials on the clinical use of kvateron, a new gaglion blocking agent, in the treatment of patients with angina pectoris.
Terap. arkh. 34 no.10:55-58 0'62 (MIRA 17:4)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. T.S. Istamanova) i Leningradskogo meditsinskogo instituta imeni I.P.Pavlova i Instituta tonkoy organicheskoy khimii (dir. - akademik AN Armyanskoy SSR prof. A.L. Mndzhoyan), Akademii nauk Armyanskoy SSR.

DAVIDOVSKIY, O. N.

PA 46/49T38

USSR/Engineering
Fuel Conservation
Turbines

Aug 48

"A Signal System Guaranteeing Turbine Units Against
Uneconomical Operation," O. N. Davidovskiy, Engr,
3 pp

"Za Ekonomiyu Topliva" Vol V, No 8

Diagram and operation of a device which prevents
turbogenerators from operating uneconomically
(under parallel operation). Device works from the
small opening of overload valves on the turbine.

46/49T38

DAVIDOVSKIY, O. N.

PA 54/49T57

USSR/Engineering

Turbines

Corrosion

Dec 48

"Possibility of Lengthening the Period Between General Overhauls of Steam Turbines," O. N. Davidovskiy, Inger, 7 pp

"Elek Stants" No 12

Recommendations change in overhaul schedule from annual to 12,000-15,000 hours of operation. Examines nature of general overhaul and factors which determine overhaul periods, influence of corrosion, vibrational wear of turbine blades, etc. Analyzes actual operating data.

54/49T57

USSR/Engineering (Contd)

Dec 48

Points out feasibility and beneficial economic effects of scheduling turbine overhauls on basis of operating time rather than annually.

54/49T57

DAVIDOVSKIY, O.N.

AID P - 1946

Subject : USSR/Engineering

Card 1/1 Pub. 29 - 26/31

Author : Davidovskiy, O. N.

Title : ~~USSR/Engineering~~
Damaging level gears of speed reducers

Periodical : Energetik, 3, 37-38, Mr 1955

Abstract : In reply to a question from a reader, the author explains the cause of damage to surfaces of geared speed reducers. This is the result of repeated cyclical loading with a cycle compression-expansion, which may create tensions surpassing the limit of surface fatigue of the material. It can be avoided by a thorough machining of the gears, which will give at least an 80% contact of working surfaces.

Institution: None

Submitted : No date

VOLAROVICH, M.P.; GAMAYUNOV, N.I.; DAVIDOVSKIY, P.N.

Study of the diffusion process in a porous medium (peat) by the
radioactive-tracer technique. Koll.zhur. 26 no.1:139-140 Ja-F
'64. (MIRA 17:4)

1. Kalininskiy torfyanoy institut i Institut torfa, Minsk.

VOLAROVICH, M.P.; GAMAYUNOV, N.I.; DAVIDOVSKIY, P.N.

Gamma-spectroscopic kinetic study of the heat and moisture conductivity of disperse materials. Koll. zhur. 27 no.1:3-7 Ja-F '65. (MIRA 18:3)

1. Kalininskiy torfyanoy institut i Vsesoyuznyy nauchno-issledovatel'skiy institut torfa, Monsk.

VOLAROVICH, M.P.; DAVIDOVSKIY, P.N.; GAMAYUNOV, N.I.

Effect of the moisture content and structure on the mechanism
of heat and moisture transfer in peat. Koll. zhur. 27 no.2:
167-171 Mr-Apr '65. (MIRA 18:6)

1. Kalininskiy torfyanoy institut i Vsesoyuznyy nauchno-
issledovatel'skiy institut torfa, Minsk.

DAVIDOVSKIY, S.N.

~~CONFIDENTIAL~~
Preventing damage to bearings of centrifugal governors of
turbines. Energetik 4 no.1:39 Ja '56. (MIRA 9:4)
(Turbines)

L 14934-63 EWT(1)/EMB(k)/BDS/EEC(b)-2/ES(w)-2 AFPTC/ASD/ESD-3/
AFWL/SSD Pi-4/Po-4/Pab-4/PB-4 AT/IJP(G)/DM

ACCESSION NR: AP3003977

S/0089/63/015/001/0060/0061

82

AUTHOR: Davidovskiy, V. G.

TITLE: Plasma oscillations with spatial non-uniformity in a magnetic field

SOURCE: Atomnaya energiya, v. 15, no. 1, 1963, 60-61

TOPIC TAGS: magnetohydrodynamics, plasma oscillation, plasma

ABSTRACT: The stability of a magnetized, rarified spatially nonuniform plasma is discussed with respect to short-wavelength, collisionless oscillations. The latter may result in an anomalous diffusion, e.e., to a slow removal of plasma from the system. In the present work, a dispersion equation is set up for oscillations of plasma which has gradients of temperature and density. The qualitative result of the computations is given in a diagram depicting the velocity distribution function for ions and electrons. Only a negligible fraction of ions enters into resonance with oscillations, but a considerable fraction of electrons does. "The author is grateful to P. Z. Sagdeyev for suggestions and to V. N. Orayevskiy for a valuable discussion." Orig. art. has: 1 figure.

ASSOCIATION: none
SUBMITTED: 18Oct62
SUB CODE: PH

DATE ACQ: 08Aug63
NO REF SOV: 005

ENCL: 00
OTHER: 000 Card 1/1

ACCESSION NR: AP4042000

S/0057/64/034/007/1242/1251

AUTHOR: Davidovskiy, V.G.; Dubovoy, L.V.; Ponomarenko, A.G.

TITLE: The resonance probe in a plasma in a magnetic field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.7, 1964, 1242-1251

TOPIC TAGS: plasma, plasma diagnostics, resonance probe, magnetic field plasma effect

ABSTRACT: This paper is concerned with the applicability of the resonance probe (L.Tonks, Phys.Rev.37,1458,1931; T.H.Jeung and I.Sayers, Proc.Phys.Soc.70B,663,1957) as a diagnostic tool in the investigation of a plasma in a magnetic field. The method consists in observing the oscillations excited in the plasma by a small probe field of frequency near the Langmuir frequency. In the absence of a magnetic field one can derive the electron concentration from the resonant frequency, and the collision frequency from the width of the resonance. The authors derive the dispersion equation for a plasma in a magnetic field and show that in addition to the resonance at the Langmuir frequency ($V = 1$), there are resonances at $V = 1 \pm \sqrt{U}$ and, under some conditions, at $V = 1 - U$. Here $V = f_0^2/f^2$, $U = f_H^2/f^2$, and f_0 , f_H and f are the

Card

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